Cassette deck 70FC567

/00R/01R/05R

Service
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Reparaturhinweise für die Cassette-Band-transportvorrichtung siehe Service Manual "Recorders tape deck CMAY2Z043A"

Service Manual

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Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

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Subject to modification

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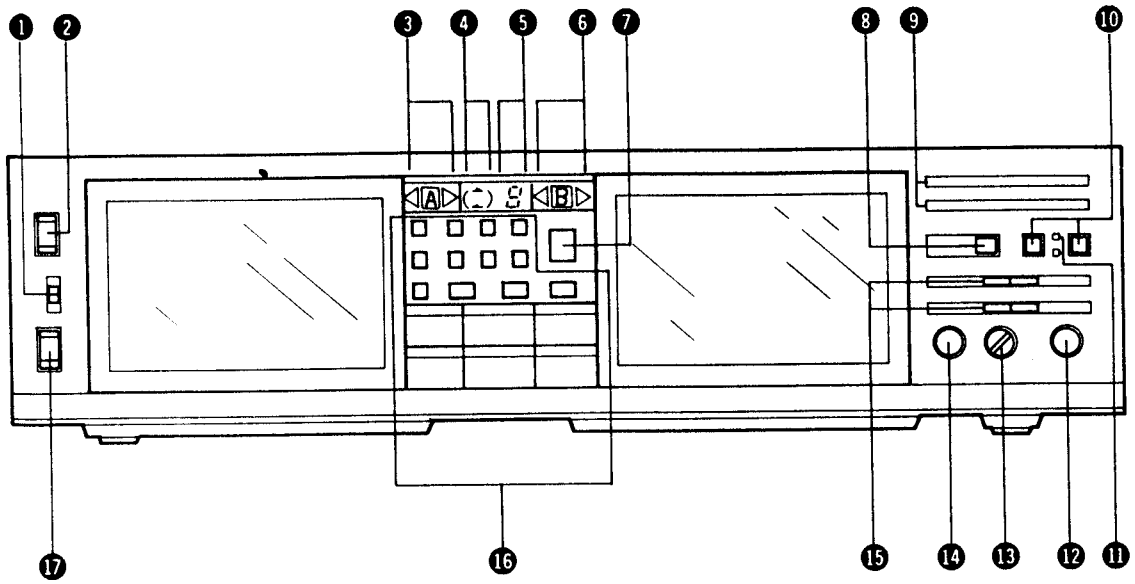
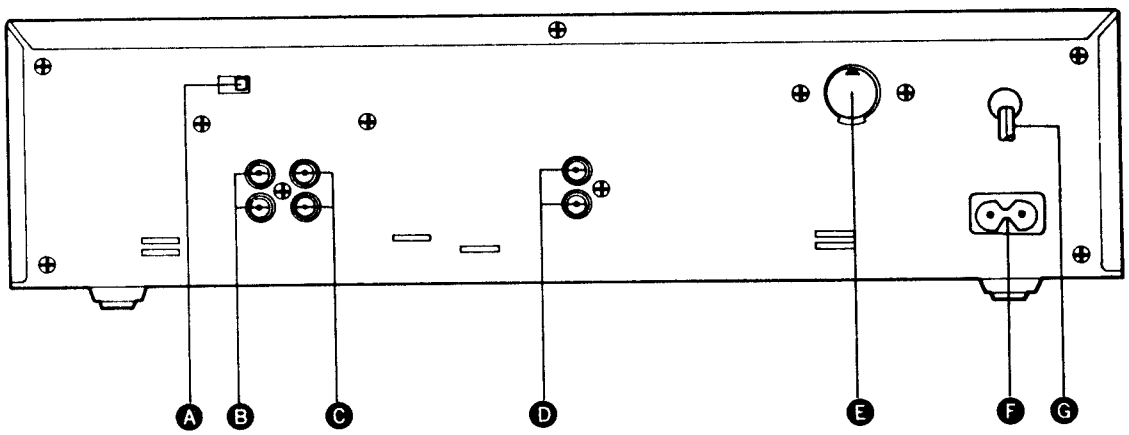
SPEZIFIKATION	Nominalwert	Typischer Wert
Allgemeines		
Netzspannung /00R	: 220 V~	: 220 V~
/01R	: 110 V - 120 V - 220 V - 240 V~	: 110 V - 120 V - 220 V - 240 V~
/05R	: 240 V~	: 240 V~
Netzfrequenz	: 50-60 Hz	: 50-60 Hz
Leistungsaufnahme	: 27 W max.	: 27 W max.
Abmessungen (BxHxT)	: 420 x 100/106 x 260 mm	: 420 x 100/106 x 260 mm
Gewicht	: 5.3 kg	: 5.3 kg
Cassettenrecorder		
Bandsystem	: Compactcassette	: Compactcassette
Spurenzahl	: 2 x 2 (Stereo)	: 2 x 2 (Stereo)
Bandgeschwindigkeit	: 4.76 cm/sec.	: 4.76 cm/sec.
Geschwindigkeitsabweichung	: ± 3% (DIN)	: ± 1.5%
Gleichlaufschwankungen (bewertet)	: ≤0.2% (DIN)	: ≤0.12% (DIN)
Wickeldauer (C60)	: ≤110 sec.	: ≤110 sec.
Bias- und Löschfrequenz	: 87 KHz ± 5%	: 87 KHz ± 5%
Frequenzbereich	: DIN 45500:	: IEC:
Metal	: 40 - 16.000 Hz	: 30 - 17.000 Hz
Chromium	: 40 - 16.000 Hz	: 30 - 17.000 Hz
Normal	: 40 - 14.000 Hz	: 30 - 16.000 Hz
Signal/Rausch (ohne Dolby)	: DIN 45500:	: IEC:
Metal	: ≥48 dB	: 58 dB
Chromium	: ≥48 dB	: 58 dB
Normal	: ≥48 dB	: 57 dB
Verbesserung mit Dolby B	: ≥8.5 dB (CCIR)	: 10 dB (bei 5 KHz)
Verbesserung mit Dolby C auf line-in cinch	: ≥17 dB (CCIR)	: 20 dB (bei 1 KHz)
Verzerrung (K3)	: ≤3%	: ≤2%
Eingangsempfindlichkeit		
Mikrophon	: 0.85 mV bei 7 kΩ	: 0.56 mV bei 2 kΩ
Leitungseingang cinch	: 70 mV bei 40 kΩ	: 70 mV bei 40 kΩ
Ausgänge		
Leitungsausgang	: ≥0.35 V/Z_0 <3 kΩ	: 0.5 V/Z_0 2.2 kΩ
Kopfhörer	: 35 mV bei 8 Ω	: 35 mV bei 8 Ω
Kopfhörerimpedanz	: 8 - 600 Ω	: 8 - 600 Ω

BEDIENUNGSELEMENTE UND IHRE FUNKTION

1	Schalter "timer"	SU10
2	Taste "eject" für Deck "A"	
3	Anzeige "direction" Deck "A"	DY43, DY44, DY55
4	Anzeige "rev mode"	DY45~DY47
5	Anzeige "QMS"	DY38
6	Anzeige "direction" Deck "B"	DY49, DY50, DY56
7	Taste "eject" für Deck "B"	
8	Nulstelltaste	
9	Aussteuerungsanzeigen "peak level"	DX01~DX10
10	Dolby-Schalter NR	SS04, SS05
11	Anzeige Dolby NR	DY04, DY05
12	Buchse "phones"	JG01
13	Mischregler "mix level"	RE39
14	Buchse "mic"	JE01
15	Aussteuerungsstelle "rec level"	RV01, RV02
16	Funktionschaltern	SS21, 23~27, 36, 38, 41, 42, 45, 51~56, 58
17	Netzschalter	S801

A	Wahlschalter "line/din" (nur /00R)	SE81
B	Leitungsausgang	JW01
C	Leitungseingang	
D	Ein- und Ausgang für Fernbedienung	JR01
E	Spannungsumschalter	S093
F	Buchse für Netzschnur (nur 00R/05R)	J093
G	Netzschnur (nur /01R)	W001





Carbon film 0.125 W or 0.2 W	70°C	5%	
Carbon film 0.25 W or 0.33 W	70°C	5%	
Metal film 0.25 W or 0.33 W	70°C	5%	
Carbon film 0.5 W	70°C	5%	
Carbon film 0.67 W	70°C	5%	
Carbon film 1 W or 1.15 W	70°C	5%	

(C) Chip component

Ceramic plate Tuning ⩽ 120 pF NP.0		2%
Ceramic plate Others		−20/+80%
Polyester flat foil		10%
Metalized polyester flat film		10%
Polyester flat foil small size (Mylar)		10%
Polysterene film/foil		1%
Tubular ceramic		
Miniature single		
Subminiature tantalum		± 20%

*a = 2.5 V
b = 3.15 V or 4 V
c = 6.3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
j = 100 V
l = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1.6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

ELEKTRISCHE MESSUNGEN UND EINSTELLUNGEN

Allgemeine Bedingungen

Für die elektrischen Messungen und Einstellungen gelten folgende allgemeine Bedingungen, soweit nicht anders vermerkt:

- Netzspannung 220 V ± 5%, 50 Hz.
- Raumtemperatur 20 bis 25°C.
- Dolby-Schalter SS04 aus.
- Aussteuerungsregler "rec level" RV01, RV02 auf Höchstwert.
- Schalter SE81 auf der Rückseite des Geräts in die Stellung "line" bringen (nur für die Ausführung /00R).
- Bei den Messungen und Einstellungen wurde von Messungen an dem linken Kanal ausgegangen. Die Anschlussstellen und Regelorgane für den rechten Kanal sind in Klammern aufgeführt.
- Die Spannungen wurden bezogen auf Masse gemessen.
- Die Einstellungen und Messungen müssen sowohl für Deck A als auch für Deck B vorgenommen werden.

Erforderliche Messgeräte und Testcassette:

- NF generator.
- Wechselspannungs-Millivoltmeter.
- Mehrzweck-Messgerät.
- Frequenzzähler.
- Universal-Testcassette SBC 419 - 4822 397 30069.
- Universal-Testcassette SBC 420 - 4822 397 30071.

Adjustment	Cassette	Recorder in position	Apply signal to	Measure on	Read on	Adjust with	Value
Tape speed *b High speed	SBC419 3150 Hz	Interconnect JM01 (deck A) JM11 (deck B) PCB PU03					
		Play (deck A or B)	–	PCB PJ03 JW01 (line out)	Freq. counter	PCB PU03 RM03 (A-deck) RM13 (B-deck)	6310 Hz ± 10 Hz 6270 Hz ± 10 Hz
		Remove the interconnections					
Normal speed *b	SBC419 3150 Hz	Play (deck A or B)	–	JW01 (line out)	Freq. counter	PCB PU03 RM06 (A-deck) RM16 (B-deck)	3150 Hz ± 10 Hz
Head azimuth	SBC419 10 KHz	Play (deck A or B)	–	JW01 (line out)	mV-meter	Head azimuth adjust screw *c	Max. output
Playback sensitivity	SBC419 315 Hz-0 dB	Play (deck A or B)	–	PCB P603 TP05 (TP06) TP04 (GND)	mV-meter	PCB PJ03 RJ47 (RJ48) (A-deck) RJ09 (RJ10) (B-deck)	430 mV
Playback frequency response	SBC419 40 Hz; 250 Hz; 6.3 KHz; 12.5 KHz	Play (deck A or B)	–	JW01 (line out)	mV-meter	–	See graph. Fig. 1 frequency response
Target value bias	SBC420 side 2 *e	Rec + Play (via pause) (deck A or B)	–	PCB RJ53 (A-deck) JJ51 point 2(5) TP04 (GND) PCB PJ03 (B-deck) JJ01 point 2(5) TP04 (GND)	mV-meter	RL31 (RL32) (A-deck) RL01 (RL02) (B-deck)	9 V *d
	SBC419 side 2 *f					RL35 (A-deck) RL05 (B-deck)	13 V
	metal cassette					RL36 (A-deck) RL06 (B-deck)	22 V
Recording sensitivity	SBC419 side 2 *f	Rec + Play (via pause) (deck A or B)	315 Hz to JW01 (line in)	TP05 (TP06) TP04 (GND)	mV-meter	LF-generator	245 mV
				Disable the bias by interconnecting pin 18, 19 and 20 of			PCB RJ53 QL31 (A-deck) PCB PJ03 QL01 (B-deck)
				JJ51 point 2(5) (A-deck) JJ01 point 2(5) (B-deck) TP04 (GND)	mV-meter	RK71 (RK72) (A-deck) RK01 (RK02) (B-deck)	18 mV = target value
				Remove the interconnection. Make a recording and play it back			
		Play (deck A or B	–	TP05 (TP06) TP04 (GND)	mV-meter	–	245 mV *g

Adjustment	Cassette	Recorder in position	Apply signal to	Measure on	Read on	Adjust with	Value
BIAS ferro	SBC420 side 2 *e	Rec + Play (via pause) (deck A or B)	–	PCB RJ53 (A-deck) JJ51 point 2(5) TP04 (GND) PCB PJ03 (B-deck) JJ01 point 2(5) TP04 (GND)	mV-meter	RL31 (RL32) (A-deck) RL01 (RL02) (B-deck)	9 V = target value
			315 Hz to JW01 (line in)	TP05 (TP06) TP04 (GND)	mV-meter	LF-generator	43 mV
			6.3 KHz-10 KHz 12 KHz-14 KHz 15 KHz-16 KHz to JW01 (line in)	Record a number of frequencies with the same input voltage and play them back			
		Play (deck A or B)	–	TP05 (TP06) TP04 (GND)	mV-meter	–	See graph Fig. 2 if necessary repeat *d BIAS adjustment *h
BIAS chromium	SBC419 side 2 *f	Adjustment is identical to BIAS ferro, but the target value is 13 V; adjust with RL35 (A-deck) and RL05 (B-deck)					
BIAS metal	Metal cassette	Adjustment is identical to BIAS ferro, but the target value is 22 V; adjust with RL36 (A-deck) and RL06 (B-deck)					
f-osc.	Arbitrary cassette	Rec (deck A or B)	–	PCB RJ53 (A-deck) JJ51 point 2 TP04 (GND) PCB PJ03 (B-deck) JJ01 point 2 TP04 (GND)	Freq. counter	LL31 (A-deck) LL01 (B-deck)	87 KHz
Quick reverse sensitivity	A portion of a leader tape *i	Play (deck A or B)	–	PCB PU03 JQ11 (A-deck) JQ12 (B-deck)	mV-meter	RQ04 (A-deck) RQ08 (B-deck)	1.1-1.5 V

Anmerkungen:

*a. Vor jeder Messung oder Einstellung mit laufendem Band empfielt es sich, die köpfe und Bandführungen zu entmagnetisieren und zu reinigen.

*b. Es ist wichtig, dass zuerst die hohe Geschwindigkeit und dann die gewöhnliche Geschwindigkeit eingestellt wird. Der Unterschied in Geschwindigkeit zwischen Deck A und Deck B darf sowohl für die gewöhnliche Geschwindigkeit wie die hohe Geschwindigkeit zuhöchst 1% sein.

*c. – Zierklappe und Zierstreifen (siehe Bild 4) beseitigen und den Kopfazimut folgendermassen einstellen:
Bandlaufrichtung nach rechts (FWD-play) - linke Schraube.
Bandlaufrichtung nach links (REV-play) - rechte Schraube.
– Wenn der Ausgangspegel zwischen dem rechten und linken Kanal verschieden ist, so ist der Kanal mit dem niedrigsten Wert auf Maximum einzustellen.
– Für Deck A und Deck B das gleiche Band und den gleichen Bandteil benutzen.
– Nach dem Einstellen die Azimut-Einstellschrauben lacksichern.

*d. – **Ferrocassette:**
Die Abgleichpotentiometer RL35 und RL36 (Deck A), RL05 und RL06 (DeckB) in die Mittelstellung bringen.
Mit den Abgleichpotentiometern RL31 (RL32) für Deck A und RL01 (RL02) für Deck B die Vormagnetisierung (BIAS) möglichst günstig einstellen.
Die Werte für links und rechts sind zu vermerken.
– **Chromcassette:**
Mit den Abgleichpotentiometern RL35 (Deck A) und RL05 (Deck B) die Vormagnetisierung (BIAS) möglichst günstig einstellen.
Der Wert für links ist zu vermerken.
– **Metalcassette:**
Mit den Abgleichpotentiometern RL36 (Deck A) und RL06 (Deck B) die Vormagnetisierung (BIAS) möglichst günstig einstellen.
Der Wert für links ist zu vermerken.
Mit den Abgleichpotentiometern die vermerkten BIAS-Werte für die Bandsorten erneut einstellen und dies wiederholen, bis die richtigen Werte gefunden sind.

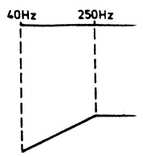
*e. Bei weniger höher Genauigkeit lässt sich auch eine Ferrocassette guter Qualität verwenden.

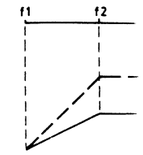
*f. Bei weniger höher Genauigkeit lässt sich auch eine Chromcassette guter Qualität verwenden.

*g. Die Ausgangsspannung an TP05 (TP06) muss 245 mV ± 0.25 dB anzeigen.
Ist dass nicht der Fall, dan mit RK71 (RK72) Deck A, RK01 (RK02) Deck B das NF-Signal (Vormagnetisierung ausgeschlossen) um soviel dB niedriger oder höher einstellen als die Messeranzeige zu hoch oder zu niedrig war.

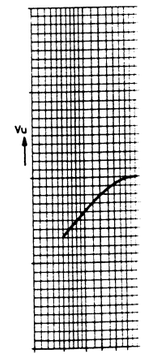
*h. Beim Einstellen des einen Kanals kann der andere etwas beeinflusst werden.
Bei einer entsprechenden Einstellung verläuft der Frequenzgang wie in Abb. 3 Kurve b, Verzerrung ⩽3%.

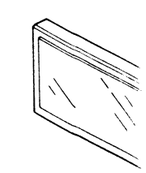
*i. Die Einstellung soll mit dem Maxell-Anlaufband UD46 oder anderen Bändern mit ähnlichem Reflektionswert vorgenommen werden.





	f1
Metal	4(
Cr	4(
Normal	4(





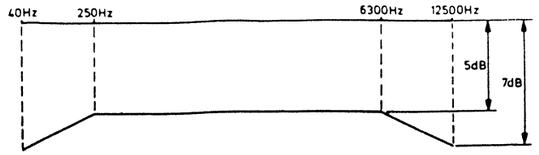


Fig. 1

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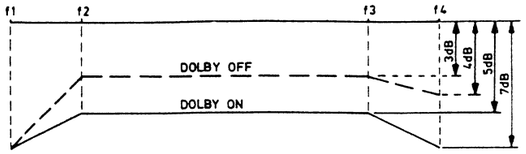


Fig. 2

29 612 A12

	f1	f2	f3	f4
Metal	40 Hz	125 Hz	8 kHz	16 kHz
Cr	40 Hz	125 Hz	8 kHz	16 kHz
Normal	40 Hz	125 Hz	8 kHz	14 kHz

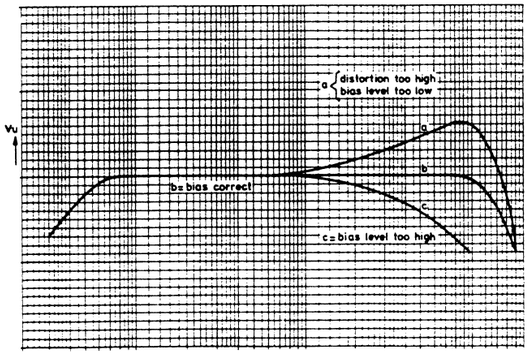


Fig. 3

29 476 A12

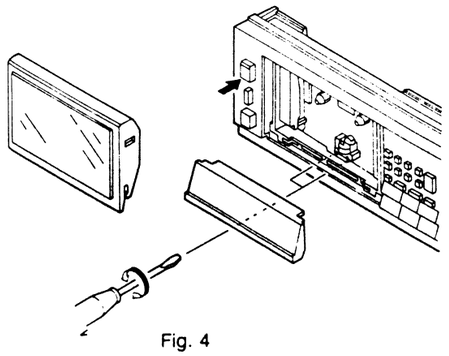
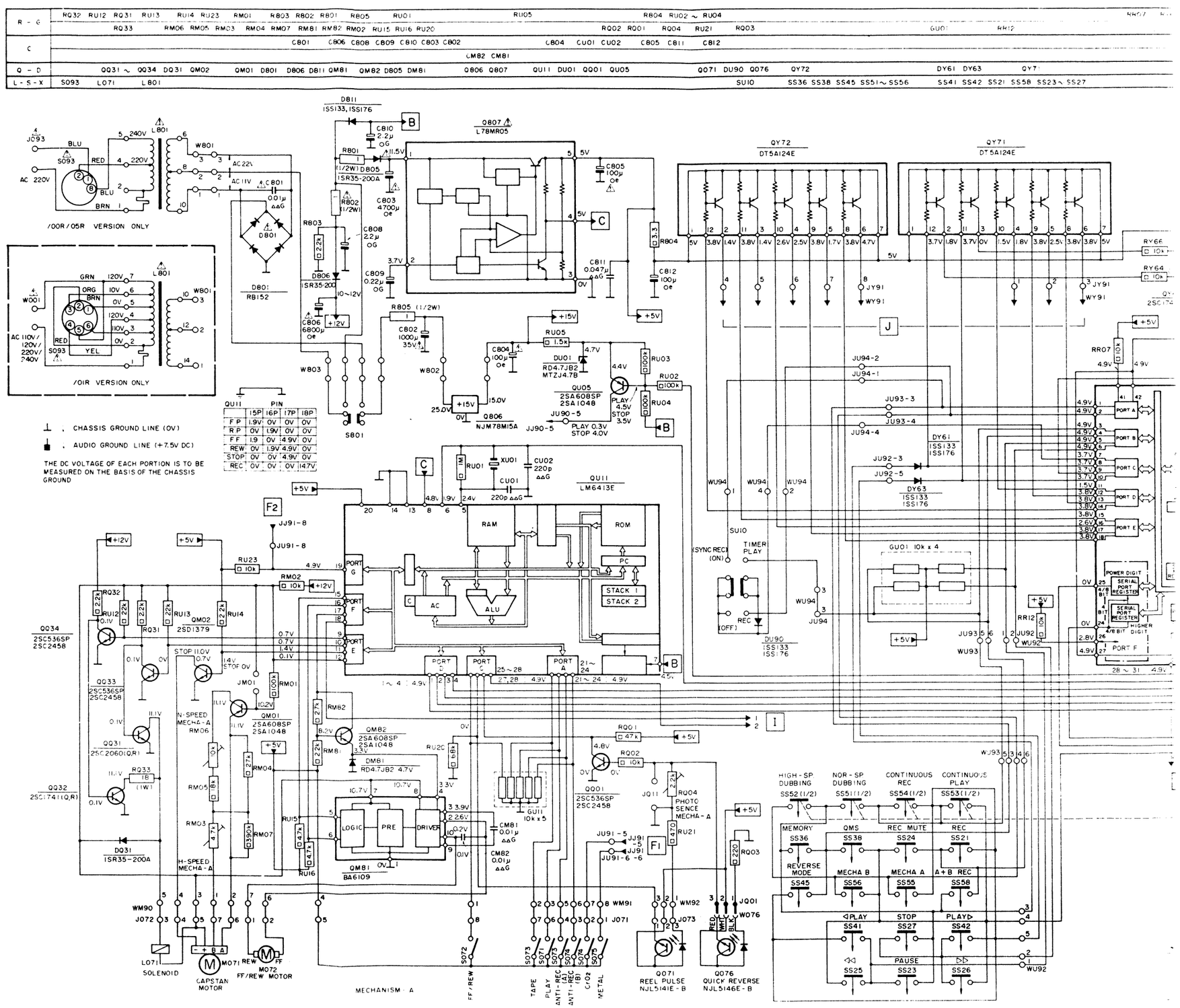


Fig. 4



SCHEMATIC DIAGRAM

| | | |

WIRING DIAGRAM

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WIRING DIAGRAM

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SCHEMATIC DIAGRAM

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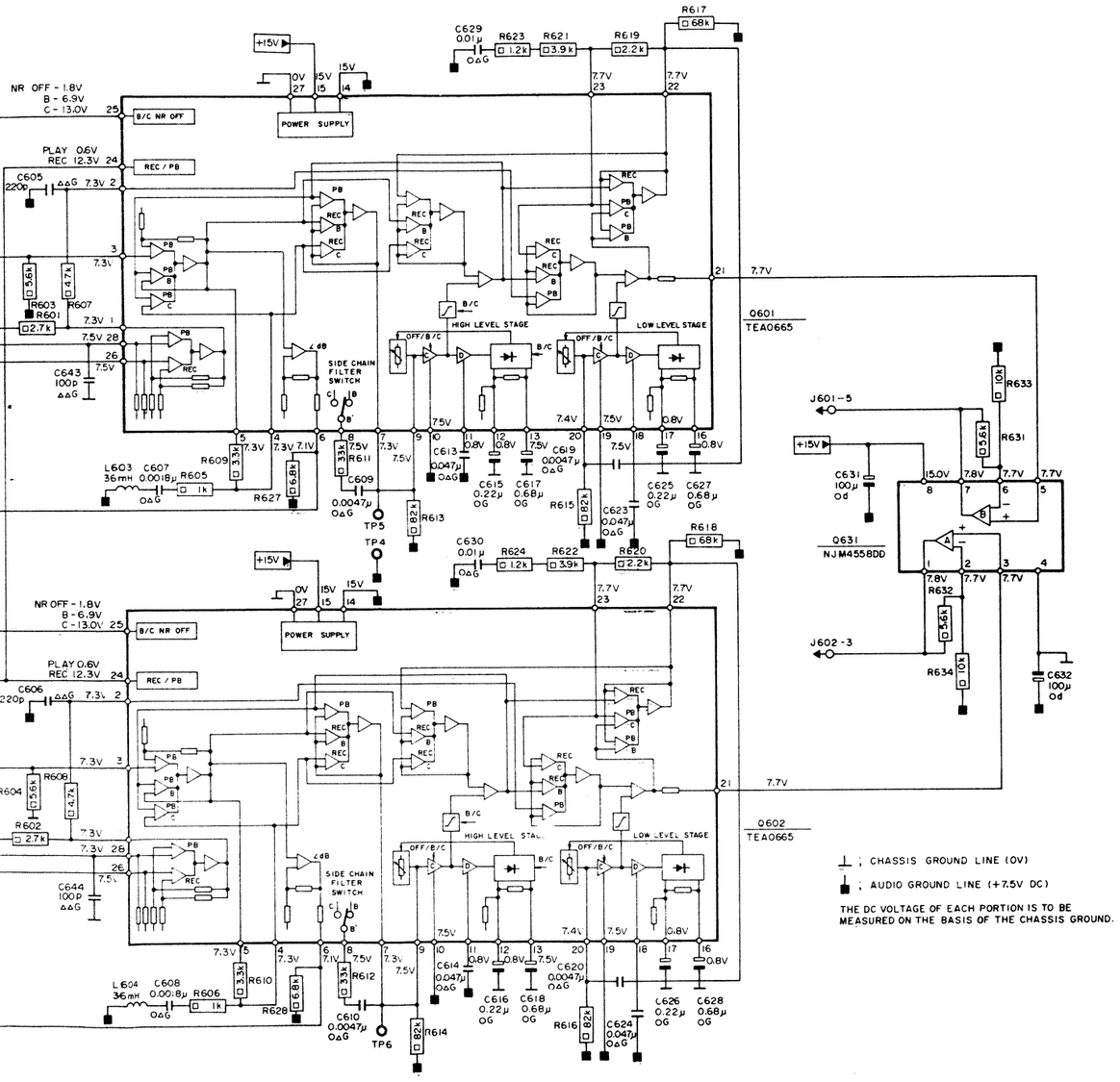
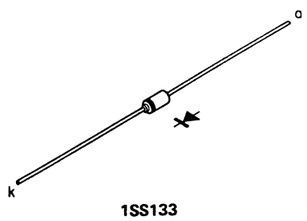
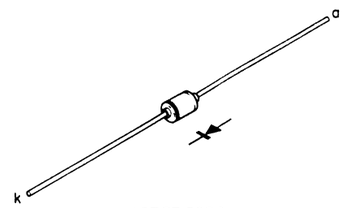
R603 R607 R613 R605 R609 R627 R611 R623 R619 ~ R624 R625 R617 R618 R631 R633		R
R604 R602 R606 R610 R628 R612 R626 R616 R632 R634		
C605 C643 C607 C609 C630 C629 C613 C615 C617 C619 C623 C625 C627 C631		C
C641 C642 C606 C644 C608 C610 C614 C616 C618 C620 C624 C626 C628 C632		
Q601 Q602 Q631		Q - D
L603 L604		L - X



Semiconductor Layout



1SS133
1SS176
MA165



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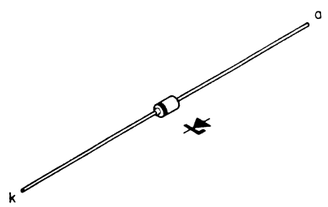
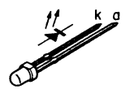
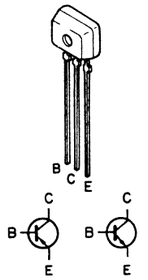


RD4.7JB2
MTZJ4.7B



SLP-281F
SLP-981C



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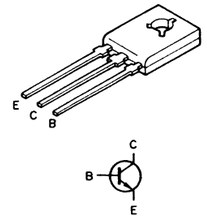
2SA933S 2SC1740S
2SA1048 2SC2458
2SA1309A 2SC3311A



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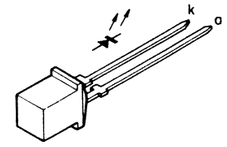

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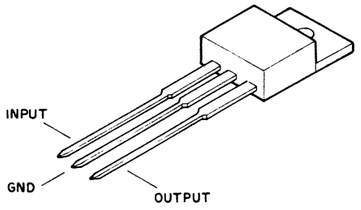

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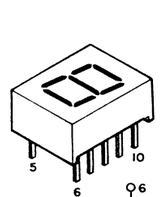
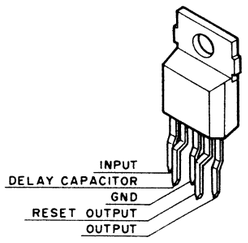
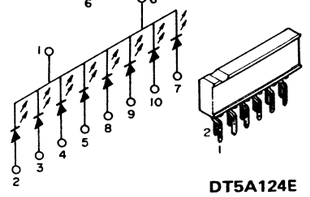


NJM4560D-D
NJM4558D-D



L78MR05



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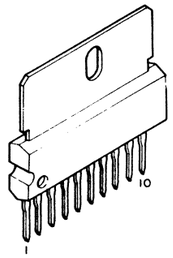
DT5A124E



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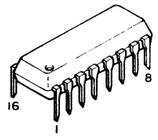

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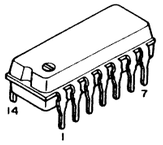

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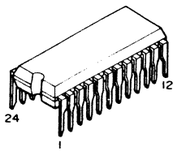

TDD1601
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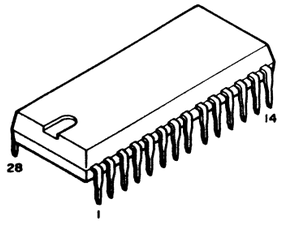
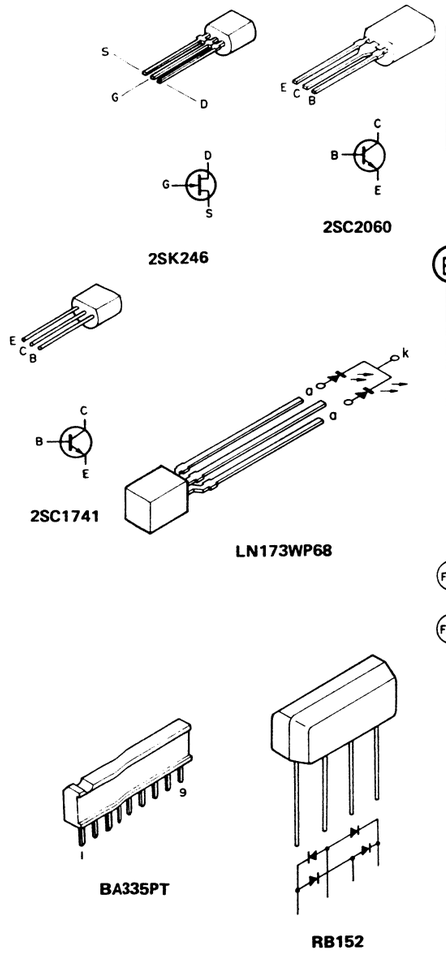


TEA0665

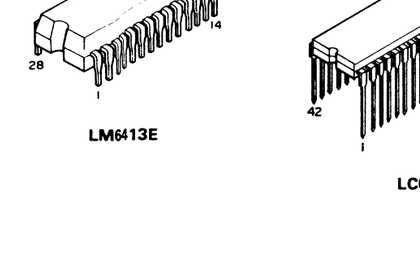
WIRING DIAGRAM

R	RJ70 RJ65~RJ68 RJ51~RJ62 R642 R611~R624 R601~R610 R631~R634
	RL31~RL37 RK71~RK76 RK79~RK83 R627 R628 R651~R654
C	CJ51~CJ61 CJ64 CJ63 CK71~CK76 CK78~CK80 C632 C631 C604~C610 C634~C652
	CL31 CL33~CL37 CL41 CL43 C641~C644 C623~C630 C613~C620 C651 C633
Q	QJ51~QJ54 QK71 QL32 QL32 QK75~QK77 DJ51 DJ52 Q651 Q652 Q602 Q601 Q631
L-X-T	LK71 LK72 XK71 LL31 LL41 TP04~TP06 L603 L604 L601 L602



2SK246

2SC2060

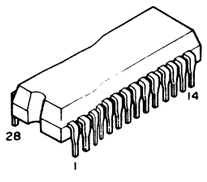


2SC1741

LN173WP68

BA335PT

RB152



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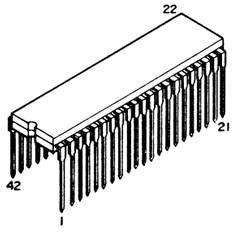
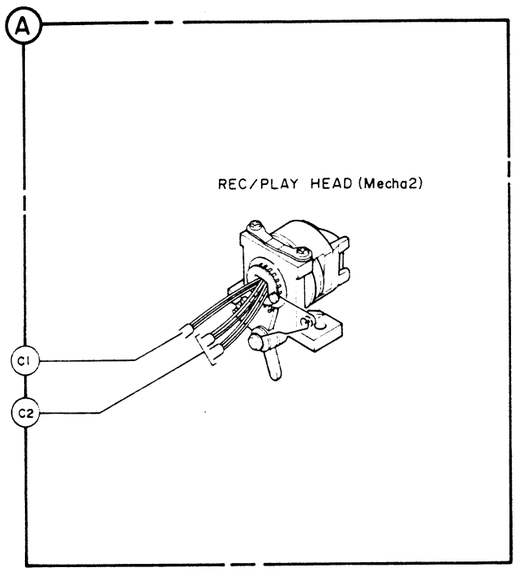
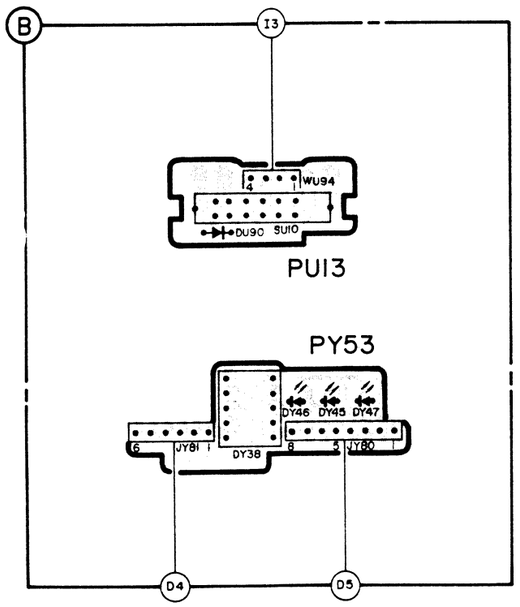


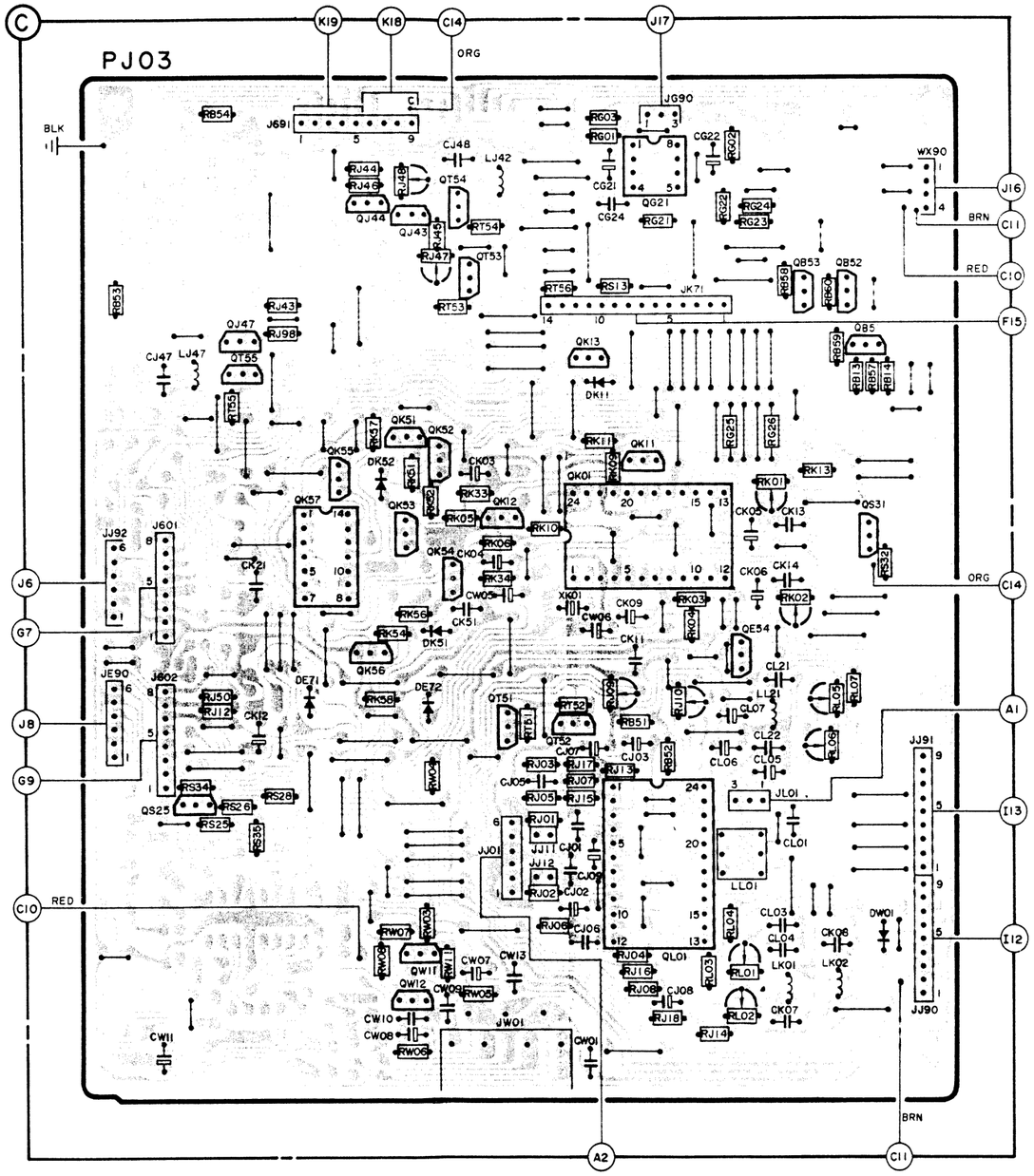
LC6520C

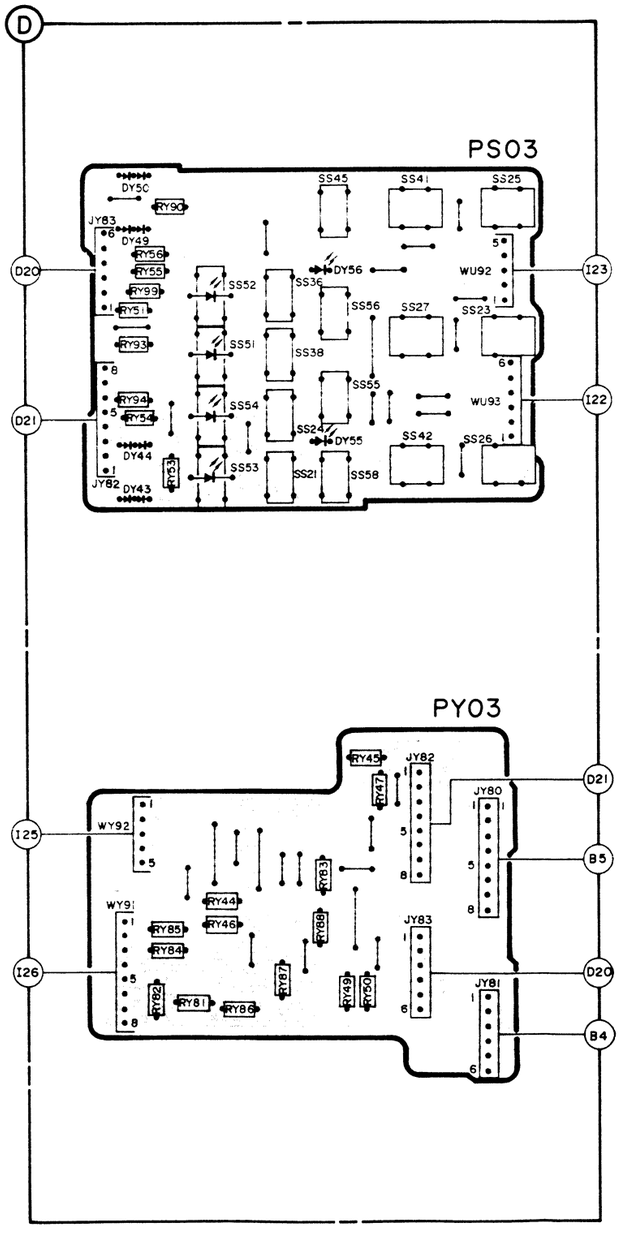
WIRING DIAGRAM

R	RB53	RB54 RT55 RJ43 RJ98 RJ44~RJ48 RT53 RT54 RT56 RG03 RG01 RS13 RG21~RG24 RG02 RB58~RB60 RB13 RB57 RB14 RG25 RG26 RK13 RS32 RY51 RY53~RY55 RY90 RY93 RY94 RY99
		RS34 RJ50 RJ12 RS25 RS26 RS35 RS28 RK51~ RK58 RW03~RW08 RW11 RK05 RK33 RK06 RK34 RK09~RK11 RT52 RT51 RB51 RB52 RJ01~RJ10 RJ13~RJ18 RK01~RK04 RL01~RL07 RY81~RY88 RY44~RY47 RY49 RY50
C	CJ47 CK12	CJ48 CK03 CK04 CK51 CW05 CG21 CG24 CG22 CK05 CK06 CK13 CK14
	CW11 CK21	CW07~CW10 CW13 CW01 CJ01~ CJ03 CJ05~ CJ09 CW06 CK09 CK11 CL03~CL07 CL21 CL22 CL01 CK07 CK08
Q-D	DU90 DY38 DY45~ DY47	QS25 QJ47 QT55 DE71 QK55~ QK57 DE72 QK51~ QK53 DK52 QJ44 QJ43 QT53 QT54 DK51 QW11 QW12 QK12 QT51 QT52 QK01 QK13 DK11 QK11 QG21 QB51~ QB53 QE54 QS31 QL01 DW01 DY43 DY44 DY49 DY50 DY55 DY56
L-X-S	SU10	LJ47 LJ42 XK01 LK01 LK02 SS51~SS54 SS21 SS24 SS36 SS38 SS45 SS56 SS55 SS58 SS41 SS27 SS42 SS25 SS23 SS26









SCHEMATIC DIAGRAM

R	RJ01 RJ02 RL07 RJ97 RJ98 RJ95 RJ96 RJ43 ~ RJ48 RJ13 ~ RJ18 RJ05 RJ06 RJ07 RJ03 RJ08 RJ04 RJ09 RB51 RJ10 RB52 RJ11 ~ RJ13 RT51 RT52 RB57 ~ RB59 RB54 RB53 RB60 RB13 RB14 RT55 RK13 RJ49 RJ50 RT56 RT53 RT54 RK09 ~ RK12 RK05 RK06 RF33 RF34 RK02 RK01 RK32 RF31 RK37 RF38 RF03 RS34 RS25 RS26 RS28 RS35 RS27 RS33 RW05 ~ RW08 RW03 RW07 RW12 RW11
C	CL01 CL03 CL04 CJ01 CJ02 CL21 CJ47 CJ48 CL06 CJ09 CL05 CL07 CJ05 CJ06 CJ07 CJ03 CJ08 CJ04 CK03 CK04 CK08 CK01 CK14 CK13 CK02 CK01 CK06 CK05 CK09 CK11 CK51 CW06 CW05 CW08
Q - D	QL01 QJ47 QJ43 QJ44 QB53 QB52 QB51 QT55 QT51 QT52 QK13 DK11 QK12 DK12 QT53 QT54 QK01 QE54 QK57 DE72 DE71 QK55 QK53 QK56 QS25 QS26 DJ61 QK54 QW12 DK51 QK51
L - S	LL01 LL21 LJ41 LJ42 XK01 LK02 LK01

REC/PLAY/ERASE HEAD H071

MECHANISM-B

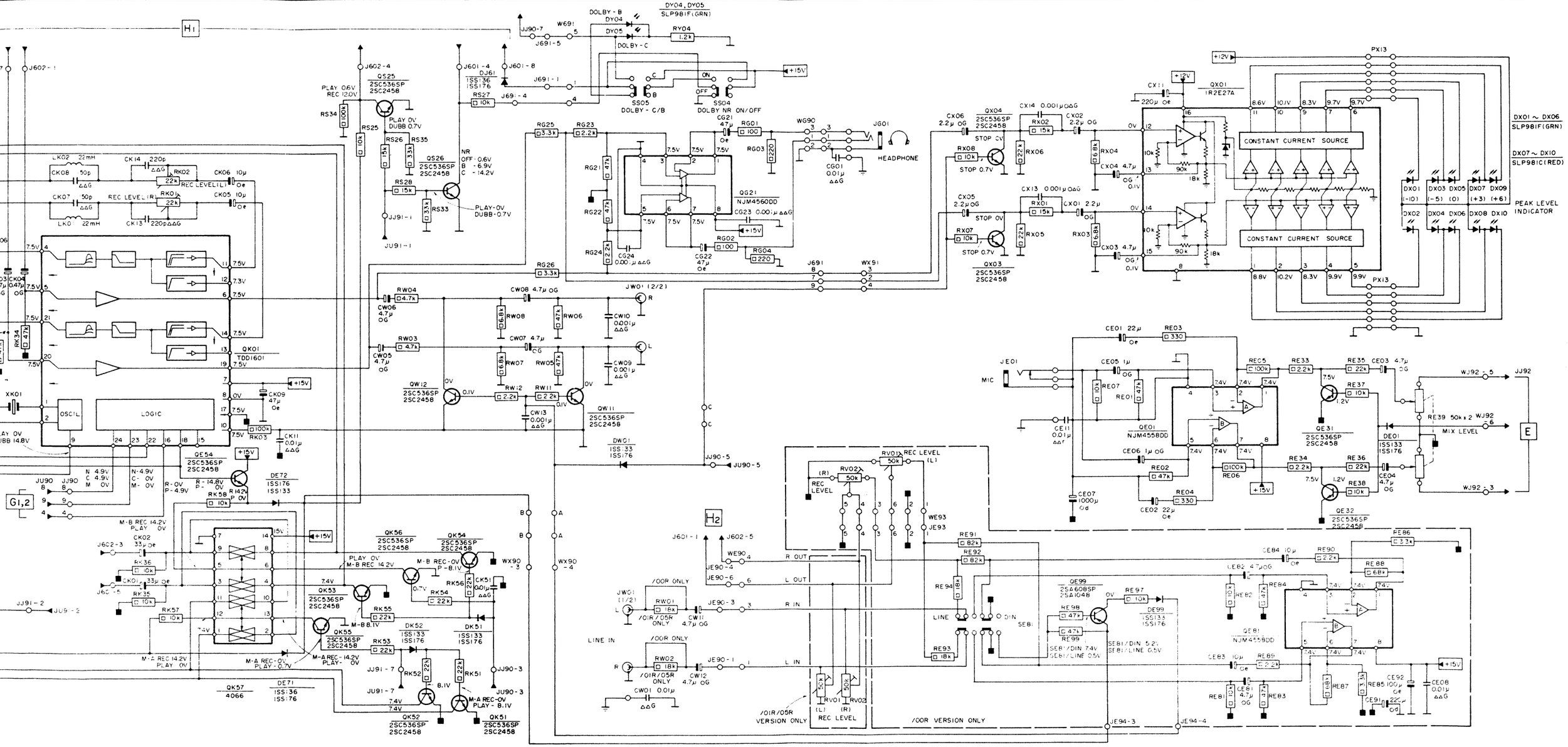
⊥ ; CHASSIS GROUND LINE (0V)

▪ , AUDIO GROUND LINE (+7.5V DC)

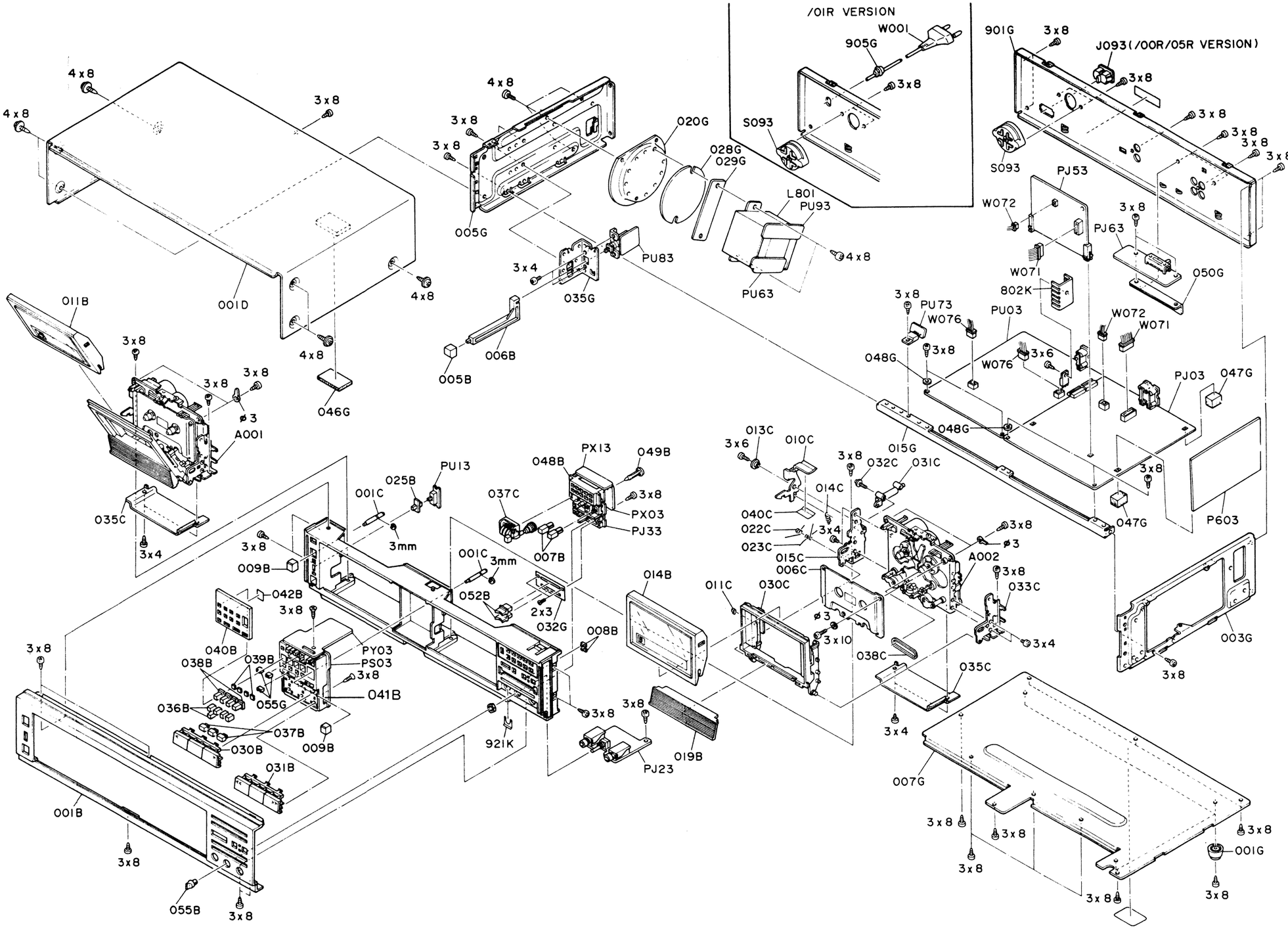
THE DC VOLTAGE OF EACH PORTION IS TO BE MEASURED ON THE BASIS OF THE CHASSIS GROUND.

SCHEMATIC DIAGRAM

RK05 RK06 RK32 RK36 RK02 RK01 RK32 RK3 RK57 RK58 RK03 RK34 ~ RK56 RW04 RW03 RW52 RK5 RW12 RW11 RW01 RW02 RG25 RG23 RG01 RG03 RG04 RX07 RX08 RX06 RX05 RX01 RX02 RX04 RX03 RE97 RE01 RE02 RE03 RE04 RE06 RE05 RE33 RE34 RE35 ~ RE38 RE39 RE98 RE99 RE97 RE81 ~ RE85 RE87 ~ RE9C RE86	R
CK03 CK04 CK0E CK0 CK14 CK13 CK02 CK0' CK06 CK05 CK09 CK11 CW06 CW05 CK51 CW08 CW07 CW13 CW01 CG24 CW11 CW12 CW09 CW10 CG22 CG21 CG23 CG01 RV02 RV01 RE93 RE94 RE91 RE92 CX06 CX11 CX05 CX13 CX14 CX01 CX02 CX03 CX04 CX11 CE11 CE07 CE01 CE05 CE06 CE02 CE03 CE04 CE81 CE82 CE84 CE83 CE91 CE92 CE08	C
QK01 QE54 QK57 DE72 DE71 QK55 QK56 QS25 QS26 DJ61 QK54 QW12 DK5 QK51 DK52 QK52 DY04 DY05 QW11 DW01 QG21 QX04 QX03 QE99 DE99 QE01 QX01 QE81 QE31 QE32 DE01 DX01 ~ DX10	Q - D
XK01 LK02 LK0' SS05 SS04 SE81	L - S



EXPLODED VIEW



CB01	Cap. elect.	0.22 µF	50 V	4822 124 21818
CJ01	Cap. foil	680 pF	50 V	4822 121 42713
CJ02	Cap. foil	680 pF	50 V	4822 121 42713
CL03	Cap. foil	220 pF	100 V	4822 121 42344
CL04	Cap. foil	220 pF	100 V	4822 121 42344
CL33	Cap. foil	220 pF	100 V	4822 121 42344
CL34	Cap. foil	220 pF	100 V	4822 121 42344
C615	Cap. elect.	0.22 µF	50 V	4822 124 21818
C616	Cap. elect.	0.22 µF	50 V	4822 124 21818
C617	Cap. elect.	0.68 µF	50 V	4822 124 41188
C618	Cap. elect.	0.68 µF	50 V	4822 124 41188
C625	Cap. elect.	0.22 µF	50 V	4822 124 21818
C626	Cap. elect.	0.22 µF	50 V	4822 124 21818
C627	Cap. elect.	0.68 µF	50 V	4822 124 41188
C628	Cap. elect.	0.68 µF	50 V	4822 124 41188
C802	Cap. elect.	1000 µF	35 V	4822 124 41313
C809	Cap. elect.	0.22 µF	50 V	4822 124 21818

GU01	Res. network	10 k	4822 111 91185
GU11	Res. network	10 k	4822 111 91186
GU31	Res. network	10 k	4822 111 91186
RB21	Safety res.	180E	4822 111 41137
RE39	Potm. carb.	50k	4822 100 20542
RJ09	Potm. trimmer	10k	4822 100 11041
RJ10	Potm. trimmer	10k	4822 100 11041
RJ47	Potm. trimmer	10k	4822 100 11041
RJ48	Potm. trimmer	10k	4822 100 11041
RK01	Potm. carb.	22k	4822 100 20545
RK02	Potm. carb.	22k	4822 100 20545
RK71	Potm. carb.	22k	4822 100 20539
RK72	Potm. carb.	22k	4822 100 20539
RL01	Potm. trimmer	47k	4822 100 11042
RL02	Potm. trimmer	47k	4822 100 11042
RL05	Potm. trimmer	10k	4822 100 11041
RL06	Potm. trimmer	10k	4822 100 11041
RL31	Potm. carb.	47k	4822 100 20541
RL32	Potm. carb.	47k	4822 100 20541
RL35	Potm. carb.	10k	4822 100 20537
RL36	Potm. carb.	10k	4822 100 20537
RM03	Potm. carb.	4.7k	4822 100 20524
RM06	Potm. trimmer	10k	4822 100 11041
RM13	Potm. carb.	4.7k	4822 100 20524
RM16	Potm. trimmer	10k	4822 100 11041
RQ04	Potm. carb.	2.2k	4822 100 20538
RQ08	Potm. carb.	2.2k	4822 100 20538
RQ33	Res. met. oxide	18E 1 W	4822 116 60444
RQ43	Res. met. oxide	18E 1 W	4822 116 60444
RV01	Potm. slide	50k	4822 105 10859
RV02	Potm. slide	50k	4822 105 10859
R801	Fuse res.	1E 1/2 W	4822 116 60306
R802	Fuse res.	1E 1/2 W	4822 116 21086
R804	Safety res.	3.3E	4822 111 90729
R805	Fuse res.	10E 1/2 W	4822.116 60306

2SA608SP	**4822 130 42715**
2SC1741 Q or R	**4822 130 43191**
2SC2060 (Q,R)	**4822 130 60173**
2SC536SP	**4822 130 42483**
2SD1379	4822 130 60174
2SK246	4822 130 42836

BA335	4822 209 83706
BA6109	4822 209 82059
CD4066BE	4822 209 83067
DT5A124 E or F	4822 209 70381
IR2E27A	4822 209 83626
LC6520C	4822 209 70384
LM6413E	4822 209 70386
L78MR05	4822 209 70385
NJM4558DD	4822 209 83631
NJM4560DD	4822 209 83274
NJM78M15A	4822 209 82829
TDD1601	4822 209 70379
TDA1600	4822 209 70378
TEA0665	4822 209 83614
4558D	4822 209 80401

GL-8E03D	4822 130 90355
GL-9EG14 green	4822 130 33183
LN173WP68 red/green	4822 130 80118
NJL5141E-B	4822 130 20196
NJL5146E-B	4822 130 20199
RB152	4822 130 50314
RD4.7JB2 4.7 V	4822 130 33758
RD4.7JB2 or MTZJ4.7B	4822 130 33759
SLP981F green	4822 130 32181
SLP981F red	4822 130 32179
1SR35-200A	4822 130 32816
1SS133	4822 130 33305

LJ41	Choke coil	4.7	mH	4822 152 20565
LJ42	Choke coil	4.7	mH	4822 152 20565
LK01	Choke coil	22	mH	4822 152 20564
LK02	Choke coil	22	mH	4822 152 20564
LK71	Choke coil	22	mH	4822 152 20564
LK72	Choke coil	22	mH	4822 152 20564
LL01	Osc. coil			4822 146 10184
LL21	Coil	2.2	mH	4822 156 10606
LL31	Osc. coil			4822 146 10184
LL41	Coil	2.2	mH	4822 156 10606
L071	Solenoid coil			4822 157 52754
L601	Filter	19 kHz MPX		4822 157 52461
L602	Filter	19 kHz MPX		4822 157 52461
L603	Coil	36	mH	4822 156 10842
L604	Coil	36	mH	4822 156 10842
L801	Transformer			4822 148 80658
XK01	Cer. filter	CSB 500E		4822 242 71533
XK71	Cer. filter	CSB 500E		4822 242 71533
XU01	Cer. filter	CSB 800K		4822 242 71405

* Miscellaneous see page 32

Miscellaneous

H071	Head, REC/PB	4822 249 10328
JE01	Jack	4822 267 30756
JG01	Jack	4822 267 30617
JR01	Socket	4822 266 30274
JW01	Jack	4822 265 30397
JO93/05R	Plug	4822 265 20222
M071	Motor main	4822 361 60437
M072	Motor F/R	4822 361 60436
SE81	Push switch Line/DIN	4822 276 11701
SS04	Push switch Dolby on/off	4822 276 11944
SS05	Push switch Dolby B/C	4822 276 11944
SS21	Push switch Rec	4822 276 11559
SS23	Push switch Pause	4822 276 11559
SS24	Push switch Rec mute	4822 276 11559
SS25	Push switch FF	4822 276 11559
SS26	Push switch Rew	4822 276 11559
SS27	Push switch Stop	4822 276 11559
SS36	Push switch Memory	4822 276 11559
SS38	Push switch QMS	4822 276 11559
SS41	Push switch Play	4822 276 11559
SS42	Push switch Rev play	4822 276 11559
SS45	Push switch Reverse mode	4822 276 11559
SS51	Push switch N-speed dubb.	4822 276 11655
SS52	Push switch H-speed dubb.	4822 276 11943
SS53	Push switch Continuos play	4822 276 11655
SS54	Push switch Continous rec	4822 276 11943
SS55	Push switch Mecha 1	4822 276 11559
SS56	Push switch Mecha 2	4822 276 11559
SS58	Push switch 1 + 2 rec	4822 276 11559
SU10	Push switch Timer R/P	4822 277 30867
S071	Push switch Play	4822 276 11762
S072	Push switch Direction	4822 276 11762
S073	Push switch Cassette lever	4822 276 20375
S074	Push switch Revs anti rec	4822 276 20375
S075	Push switch Metal lever	4822 276 11796
S093/05R	Voltage selector	4822 272 10236
S801	Push Switch Power Stand by	4822 276 11816